

Figure 1 consists of 12 subplots, labeled (a) through (l), each showing a histogram of the number of non-zero elements in the vector  $x$ . The x-axis for all plots is 'Number of non-zero elements in  $x$ ' with major ticks at 0, 20, 40, 60, 80, 100, and 120. The y-axis is 'Frequency' with major ticks at 0, 20, 40, 60, 80, and 100. The subplots correspond to different values of  $n$ : (a)  $n=10$ , (b)  $n=20$ , (c)  $n=30$ , (d)  $n=40$ , (e)  $n=50$ , (f)  $n=60$ , (g)  $n=70$ , (h)  $n=80$ , (i)  $n=90$ , (j)  $n=100$ , (k)  $n=110$ , and (l)  $n=120$ . As  $n$  increases, the distribution of non-zero elements shifts to the right, indicating a higher number of non-zero elements in the vector  $x$ .

Figure 1 consists of 12 subplots, labeled (a) through (l), each showing a histogram of the number of non-zero elements in the vector  $x$  for a specific value of  $n$ . The subplots are arranged vertically. The x-axis for all plots is 'Number of non-zero elements' with tick marks at 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12. The y-axis is 'Frequency' with tick marks at 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10. The histograms show a unimodal distribution that shifts to the right as  $n$  increases from 1 to 12. For  $n=1$  (a), the distribution is centered at 1. For  $n=12$  (l), the distribution is centered at 12.

Figure 1 consists of 12 subplots, labeled (a) through (l), each showing a histogram of the number of non-zero elements in the vector  $x$  for a specific value of  $n$ . The subplots are arranged vertically. The x-axis for all plots is 'Number of non-zero elements' with tick marks at 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12. The y-axis is 'Frequency' with tick marks at 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10. The histograms show a unimodal distribution that shifts to the right as  $n$  increases from 1 to 12. For  $n=1$  (a), the distribution is centered at 1. For  $n=12$  (l), the distribution is centered at 12.